



Condition Assessment Program

Sandia National Laboratories

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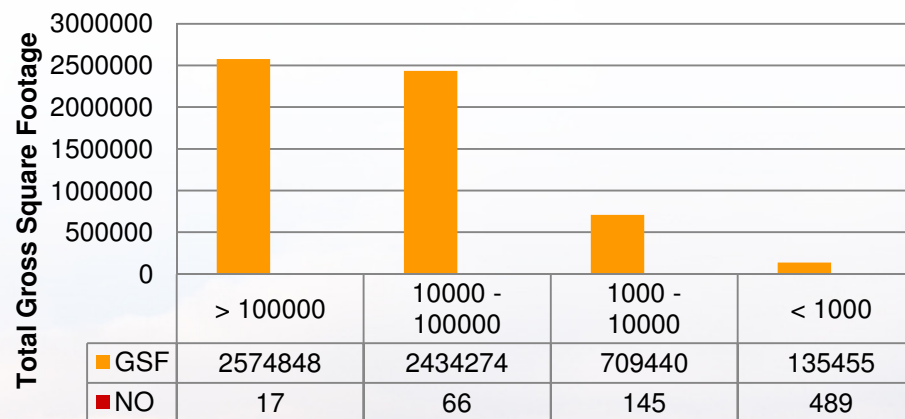
Purpose of CAS

- **Correctly identify condition of real property assets to inform capital investments**
 - Annual budget needed to maintain RPAs in a fit-for-mission-use condition to meet contract performance goals for deferred maintenance.
- **Comply with DOE Order 430.1B**

Background

- SNL has a wide variety of Buildings and Trailers types sizes, locations, and ages.
- Limited resources and budgets demand efficiency.

Size Distribution of RPAs at SNL/NM



83 (12%)
bldgs = 86%
of total GSF

212 Trailers and Mobile Offices house over 1000 staff

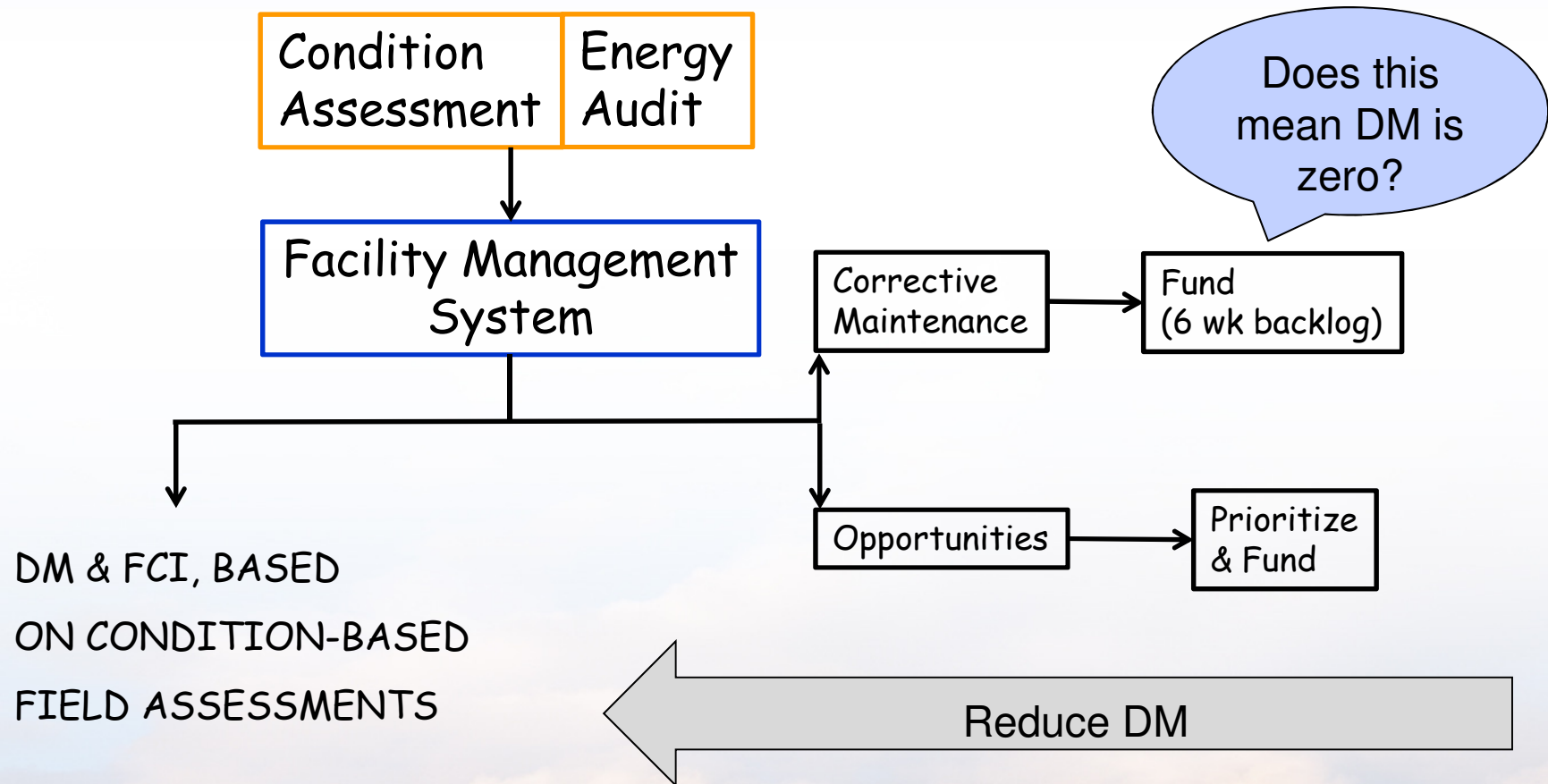
Average GSF = 1440



Graded Approach

- **Conduct Condition-Based Field Assessments on major buildings**
 - Assess nine building systems individually
- **Mobile Offices and Trailers**
 - Single rating inspection
- **Other Structures and Facilities (with the exception of infrastructure)**
 - Single rating inspection
- **Buildings < 1,000 square feet**
 - Graded approach depending on purpose
- **Leased buildings and facilities**
 - Currently evaluating strategy for full-service leases

Condition Assessment Work Flow



BSI Weighting Factors

Uniformat II	Condition Based Field Assessment Building System Items
A10	Structural
A20	Structural
B10	Structural
B20	Exterior
B30	Roof
C10	Interior
C20	Interior
C30	Interior
D10	Conveyance
D20	Plumbing
D30	HVAC
D40	Fire Protection
D50	Electrical
E10	Interior
E20	Interior
F10	Struct, Ext, Roof by weighted avg
F20	N/A
G (ALL)	N/A

	System Condition RPV Percentages				
BSI	5	4	3	2	1
STRUCT	0	1	10	25	150
EXT	0	1	10	50	101
ROOF	0	9	38	75	150
HVAC	0	2	13	63	133
ELECT	0	2	13	63	133
PLUMB	0	2	10	57	121
CONV	0	2	13	50	100
INT	0	1	10	50	101
FIRE PROT	0	2	11	60	127

UNIFORMAT II PERCENTAGES OF FIMS RPV MODELS

	A10	A20	B10	B20	B30	C10	C20	C30	D10	D20	D30	D40	D50	E10	E20	F10	F20	ALL	Σ
E11Lab/Office	6.2	4.7	4.1	7.6	4.4	9.9	0.0	14.8	0.0	17.1	14.4	2.2	13.4	1.2	0.0	0.0	0.0	0.0	100

CORRESPONDING BSI PERCENTAGES OF FIMS RPV

	STRUCT	EXT	ROOF	HVAC	ELECT	PLUMB	CONV	INT	FIRE	SUM
E11 Lab/Office	15.0	7.6	4.4	14.4	12.9	17.1	0.0	25.9	2.7	100
COMPARE	15.0	7.6	4.4	14.4	13.4	17.1	0.0	25.9	2.2	100



Comparison of CAIS and BSI Approaches

- **CAIS – Rate systems or components on a 1 – 6 basis.**
 - If 1, 2, or 3 then 0 % DM
 - If 4,5, or 6 , then 100% DM
 - Sum all system or component DM with Uniformat II categories.
 - Sum Uniformat II categories to obtain total DM of the RPA DM
- **BSI – Rate systems 1-5**
 - If 5, then 0% DM
 - If < 5, prorate DM based on table

$$\$DM_{RPA} = \sum_{n=1}^{n=9} BSI\% \times RPV\% \times \$RPV$$



Conclusions

- SNL Management has committed to using Tririga as its Facilities Management Database.
- The assessment module in Tririga is consistent with the UNIFORMAT II methodology.
- Our FY 13 goal is benchmark our system with other DOE sites to learn and seek improvement in our CAS program.